

### **Amendments to the Claims**

Please cancel claims 19, 20, 26-29 and 38 without prejudice. Please amend the remaining claims and add new claims 39-42 as indicated in the listing of claims below.

### **Listing of Claims**

1-17. Cancelled.

18. (Currently amended) An apparatus for culturing cells, comprising:

- (a) a fermentor for growing bacterial cells, wherein said fermentor comprises:
  - (i) at least one inlet port for receiving fluid containing materials needed to maintain bacterial growth;
  - (ii) at least one outlet port through which medium containing bacteria can pass;
- (b) a culture vessel for growing eukaryotic cells attached to a solid support, wherein said culture vessel comprises:
  - (i) at least one inlet port which is connected to an outlet port of said fermentor;
  - (ii) at least one outlet port for removing fluid from said culture vessel; and

wherein said solid support is a tissue culture flask, tissue culture dish, a multiwell plate, a bead or a membrane;
- (c) means for moving fluid from an outlet port of said fermentor to a connected inlet port of said culture vessel;
- (d) means for removing fluid from an outlet port of said culture vessel;
- (e) a second outlet port for removing fluid from said fermentor, wherein said second outlet port is not connected to said culture vessel; and
- (f) means for moving fluid out of said fermentor and through said second outlet port.

19. Cancelled.

20. Cancelled.

21. (Currently amended) The apparatus of claim ~~20~~ 18, further comprising:
- (g) a reservoir capable of providing nutrient medium for growing bacteria, wherein said reservoir is connected to an inlet port of said fermentor; and
  - (h) means for removing said nutrient medium from said reservoir to the inlet port of said fermentor recited in (g).
22. (Previously presented) The apparatus of claim 21, wherein said fermentor further comprises a second inlet port.
23. (Previously presented) The apparatus of claim 22, further comprising:
- (i) a second reservoir capable of providing material for maintaining growth of bacteria, wherein said second reservoir is connected to said second inlet port of said fermentor; and
  - (j) means for moving fluid from said second reservoir to said second inlet port.
24. (Currently amended) The apparatus of any one of claims 18-23, wherein said ~~culture vessel~~ solid support is a tissue culture flask, ~~tissue culture dish or multiwell plate~~.
25. (Previously presented) The apparatus of claim 18, wherein said means recited in (c) is a pump.
- 26-29. Cancelled.
30. (Previously presented) The apparatus of claim 21, wherein each of the means recited in (c), (f) and (h) is a pump.
31. (Previously presented) The apparatus of claim 21, wherein each of the means recited in (c), (d) (f) and (h) is a pump.

32. (Previously presented) The apparatus of claim 22, wherein each of the means recited in (c), (f) and (h) is a pump.
33. (Previously presented) The apparatus of claim 22, wherein each of the means recited in (c), (d), (f) and (h) is a pump.
34. (Previously presented) The apparatus of claim 23, wherein each of the means recited in (c), (f), (h) and (j) is a pump.
35. (Previously presented) The apparatus of claim 23, wherein each of the means recited in (c), (d), (f), (h) and (j) is a pump.
36. (Currently amended) The apparatus of ~~any one of claims 18-23 or any one of claims 25-35~~ 18, 20-23, 25 or 30-35, wherein said fermentor further comprises a device for mixing fluid within said fermentor.
37. (Previously presented) The apparatus of claim 36, wherein said device for mixing fluid within said fermentor is a stir motor driven paddle.
38. Cancelled.
39. (New) An apparatus for culturing cells, comprising:
  - (a) a fermentor for growing bacterial cells, wherein said fermentor comprises:
    - (i) at least one inlet port for receiving fluid containing materials needed to maintain bacterial growth;
    - (ii) at least one outlet port through which medium containing bacteria can pass;
  - (b) a culture vessel for growing eukaryotic cells attached to a solid support, wherein said culture vessel comprises:
    - (i) at least one inlet port which is connected to an outlet port of said fermentor;

- (ii) at least one outlet port for removing fluid from said culture vessel; and  
wherein said solid support is a tissue culture flask, tissue culture dish, a multiwell plate, a bead or a membrane;
  - (c) means for moving fluid from an outlet port of said fermentor to a connected inlet port of said culture vessel;
  - (d) a second outlet port for removing fluid from said fermentor, wherein said second outlet port is not connected to said culture vessel; and
  - (e) means for moving fluid out of said fermentor and through said second outlet port.
40. (New) The apparatus of claim 39, further comprising:
- (f) a reservoir capable of providing nutrient medium for growing bacteria, wherein said reservoir is connected to an inlet port of said fermentor; and
  - (g) means for removing said nutrient medium from said reservoir to the inlet port of said fermentor recited in (g).
41. (New) The apparatus of claim 40, wherein said fermentor further comprises a second inlet port.
42. (New) The apparatus of claim 41, further comprising:
- (h) a second reservoir capable of providing material for maintaining growth of bacteria, wherein said second reservoir is connected to said second inlet port of said fermentor; and
  - (i) means for moving fluid from said second reservoir to said second inlet port.